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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,699	03/30/2001	Hiroshi Akada	35.C15243	8784

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EXAMINER

NGUYEN, MICHELLE P

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 02/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,699

Applicant(s)

AKADA, HIROSHI

Examiner

Michelle Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

It is understood that the camera circuit board is disposed within the camera unit 1. However, on page 11, lines 23-4, it is stated that the camera circuit board is disposed above or below the camera unit 1;

On page 30, line 21, "in" should be --on--;

On page 32, line 7, "in" should be --on--.

Appropriate correction and/or clarification is required.

Drawings

2. The drawings are objected to for the following reasons:

The views do not include the following reference sign(s) mentioned in the description: 9, 10b-3, 11b-3, 6d-3, 11a-2, 12a-3, 32b, 25, 29, 30, 31, 32a, 34, 34a, 34b, 36, 37, 38, 39, 43e and 100c;

The views include the following reference sign(s) not mentioned in the description: 6c-1, 6c-2, 10b-2, 6d-2, 11a-1 and 11b-2;

The reference character "101c" has been used to designate both a protruded portion and a screw;

Fig. 3 does not show the tilt motor 28 as stated on page 17, lines 26-7; and

Since the drawings must show every feature of the invention specified in the claims, the placement of the first circuit board on the upper side

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or the lower side of the lens unit in the camera unit must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoe (U.S. Patent No. 6,011,925) in view of Blackshear (U.S. Patent No. 4,945,367).

With regard to claims 1 and 6, Hosoe discloses a movable camera apparatus (image input apparatus 1; see Fig. 3) comprising a camera unit (camera unit 10) and a pan head (electric pan head 20) comprising a movable portion (not numbered) and a fixed portion (not numbered). Here examiner interprets the top surface of the electric pan head 20 to be the movable portion and the bottom portion of the electric pan head 20 that extends from the top surface to the bottom surface of the pan head 20 to be the fixed portion. Hosoe teaches the image input apparatus 1 to include:

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first and second support portions (not numbered) erected from the movable portion for supporting the camera unit 10 from the opposite sides thereof for tilt rotation (see Fig. 3);

a first circuit board (not shown) disposed in the camera unit 10 (see Col. 2, lines 52-6). Here Hosoe teaches the camera unit 10 to comprise a microcomputer, thereby teaching implicitly the camera unit 10 to comprise a circuit board);

a second circuit board (not shown) that may be disposed on the fixed portion (see Col. 2, lines 57-60). Here Hosoe teaches the electric pan head 20 to comprise a microcomputer, thereby teaching implicitly the electric pan head 20 to comprise a circuit board. With respect to the position of the second circuit board, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe a circuit board disposed on the fixed portion. Applicant has not disclosed that the specific position of the second circuit board with respect to the fixed portion solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the second circuit board positioned anywhere with respect to the fixed portion such as on the surface of the fixed portion; and

a connecting member (cable 2) for connecting the first and second circuit boards together (see Col. 2, line 65, Col. 3, lines 4-8 and Fig. 1);

wherein the cable 2 may be disposed on the second support portion. That is, it would have been an obvious matter of design choice to one

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having ordinary skill in the art at the time the invention was made to incorporate into the image input apparatus as disclosed by Hosoe a cable disposed on the second support portion for connecting the circuitry of the camera 10 with the circuitry of the electric pan head 20. Applicant has not disclosed that the specific position of the connecting member with respect to the second support portion solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the connecting member positioned on either one of the support portions; and

wherein the camera unit 10 and the movable portion are shaped so that even if the camera unit 10 is rotated to a nearly vertical position about a tilt rotary shaft, the surface of the camera unit 10 may not interfere with the surface of the movable portion (see Fig. 3).

Hosoe does not teach explicitly the center of gravity of the camera unit 10 to be disposed near the center line of the tilt rotation. However, Blackshear discloses a movable camera apparatus comprising a camera unit (camera 30) and a movable portion (platform 22) having first and second support portions (not numbered) erected therefrom for supporting the camera 30 from the opposite sides thereof for tilt rotation (see Col. 4, lines 49-52, Figs. 1 and 2). Blackshear teaches the center of gravity of the camera 30 to be coincident with the intersection of the pan and tilt axes such that the camera 30 is kinematically balanced for rapid pan and tilt movement rates (see Col. 5, lines 4-8). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by

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Hosoe a camera positioned as taught by Blackshear for maintaining balance of the camera.

Hosoe also does not teach the tilt rotation driving means to be provided on the first support portion. However, Blackshear does show the rotation driving means (motor 27) to be mounted to one of the two support portions (see Col. 4, lines 41-2, lines 49-52, Figs. 1 and 2). Therefore, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe tilt rotation driving means positioned as taught by Blackshear. Applicant has not disclosed that the specific position of the tilt rotation driving means with respect to the first support portion solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the tilt rotation driving means positioned on any one of the support portions such as the first support portion.

With regard to claims 2 and 7, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe a circuit board disposed in a camera unit, positioned at either side of the camera. Applicant has not disclosed that the specific position of the first circuit board with respect to the first and second support portions solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the first circuit board positioned at either side of the camera, that is, the first support portion side or the second support portion side.

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With regard to claims 3 and 8, Hosoe teaches the camera unit 10 to include a lens unit (see Col. 6, lines 62-4), but does not teach the first circuit board to be disposed on the upper side or the lower side of the lens unit in the camera unit 10. However, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe a circuit board disposed in a camera unit, positioned on either side of the lens unit.

With regard to claims 5 and 10, it is well known in the art to provide for a structure an opening portion for access to circuitry enclosed within the structure and a covering for the opening portion. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe support portions that are of structure having an opening portion in the outer side thereof, and a case member for covering the opening portion that is mountable on the opening portion.

5. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoe in view of Blackshear as applied to claim 1 above, and further in view of Koizumi (U.S. Patent No. 6,203,216).

Koizumi discloses a movable camera apparatus (panhead device 1; see Fig. 1) comprising a camera unit (video camera 100) and a pan head (panhead 2), the panhead device 1 including a first circuit board (not shown) disposed in the video camera 100, a second circuit board (not shown) disposed on the panhead device, and a connecting member (communication cable 6) for

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connecting the first and second circuit boards together (see Col. 4, lines 46-50). Here Koizumi teaches the video camera 100 and the panhead device 1 to each have circuitry, thereby teaching implicitly the video camera 100 and the panhead device 1 to each have a circuit board. With respect to the communication cable 6, Koizumi teaches the communication cable 6 to be a flexible member for ensuring its durability (see Col. 6, lines 23-9). Further, Koizumi shows the communication cable 6 to be formed into a voluted shape about the vicinity of the center line of the pan rotation (see Col. 8, lines 25-32 and Fig. 22). Here Koizumi teaches the voluted shape to allow for a large movable range of cables to be assured within limited space, thereby teaching implicitly that a communication cable may be formed into a voluted shape about the vicinity of the center line of the tilt rotation as well. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe a flexible communication cable as disclosed by Koizumi for allowing for a large movable range of cables to be assured within limited space.

6. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoe in view of Blackshear and Koizumi.

With regard to claim 11, Hosoe discloses a movable camera apparatus (image input apparatus 1; see Fig. 3) comprising a camera unit (camera unit 10) and a pan head (electric pan head 20) comprising a movable portion (not numbered) and a fixed portion (not numbered). Here examiner interprets the top surface of the electric pan head 20 to be the movable portion and the bottom

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portion of the electric pan head 20 that extends from the top surface to the bottom surface of the pan head 20 to be the fixed portion. Hosoe teaches the image input apparatus 1 to include:

first and second support portions (not numbered) erected from the movable portion for supporting the camera unit 10 from the opposite sides thereof for tilt rotation (see Fig. 3);

a first circuit board (not shown) disposed in the camera unit 10 (see Col. 2, lines 52-6). Here Hosoe teaches the camera unit 10 to comprise a microcomputer, thereby teaching implicitly the camera unit 10 to comprise a circuit board);

a second circuit board (not shown) that may be disposed on the fixed portion (see Col. 2, lines 57-60). Here Hosoe teaches the electric pan head 20 to comprise a microcomputer, thereby teaching implicitly the electric pan head 20 to comprise a circuit board. With respect to the position of the second circuit board, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe a circuit board disposed on the fixed portion. Applicant has not disclosed that the specific position of the second circuit board with respect to the fixed portion solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the second circuit board positioned anywhere with respect to the fixed portion such as on the surface of the fixed portion; and

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a connecting member (cable 2) for connecting the first and second circuit boards together (see Col. 2, line 65, Col. 3, lines 4-8 and Fig. 1);

wherein the tilt rotation driving means may be provided in the first support portion. That is, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into the image input apparatus as disclosed by Hosoe a tilt rotation driving means disposed in the first support portion for rotating the camera unit 10 about the tilt axis. Applicant has not disclosed that the specific position of the tilt rotation driving means with respect to the first support portion solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the connecting member positioned in either one of the support portions; and

wherein the cable 2 may be disposed in the second support portion. That is, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into the image input apparatus as disclosed by Hosoe a cable disposed in the second support portion for connecting the circuitry of the camera 10 with the circuitry of the electric pan head 20. Applicant has not disclosed that the specific position of the connecting member with respect to the second support portion solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the connecting member positioned in either one of the support portions.

Hosoe does not teach the cable 2 to be disposed in a voluted shape substantially about the rotary shaft of the tilt rotation. However, Koizumi discloses a movable camera apparatus (panhead device 1; see Fig. 1) comprising a camera unit (video camera 100) and a pan head (panhead 2), the panhead device 1 including a first circuit board (not shown) disposed in the video camera 100, a second circuit board (not shown) disposed on the panhead device, and a connecting member (communication cable 6) for connecting the first and second circuit boards together (see Col. 4, lines 46-50). Here Koizumi teaches the video camera 100 and the panhead device 1 to each have circuitry, thereby teaching implicitly the video camera 100 and the panhead device 1 to each have a circuit board. With respect to the communication cable 6, Koizumi shows the communication cable 6 to be formed into a voluted shape about the rotary shaft of the pan rotation (see Col. 8, lines 25-32 and Fig. 22). Here Koizumi teaches the voluted shape to allow for a large movable range of cables to be assured within limited space, thereby teaching implicitly that a communication cable may be formed into a voluted shape about the rotary shaft of the tilt rotation as well. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe a communication cable as disclosed by Koizumi for allowing for a large movable range of cables to be assured within limited space.

With respect to claim 12, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made

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to incorporate into an image input apparatus as disclosed by Hosoe a circuit board disposed in a camera unit, positioned at either side of the camera. Applicant has not disclosed that the specific position of the first circuit board with respect to the first and second support portions solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the first circuit board positioned at either side of the camera, that is, the first support portion side or the second support portion side.

With regard to claim 13, Hosoe teaches the camera unit 10 to include a lens unit (see Col. 6, lines 62-4), but does not teach the first circuit board to be disposed on the upper side or the lower side of the lens unit in the camera unit 10. However, it would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe a circuit board disposed in a camera unit, positioned on either side of the lens unit.

With regard to claim 14, Koizumi teaches the communication cable 6 to be a flexible member for ensuring its durability (see Col. 6, lines 23-9). Further, inherent in the structure of the panhead device 1 is the creation of a rotating force by the elasticity of the communication cable 6 disposed in a voluted shape in a direction opposite to the direction of rotation of the video camera 100 by gravity. Therefore, it would have been obvious to one having ordinary skill at the time the invention was made to incorporate into the image input apparatus as disclosed by Hosoe a communication cable as disclosed by Koizumi.

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With respect to claim 15, it is well known in the art to provide for a structure an opening portion for access to circuitry enclosed within the structure and a covering for the opening portion. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate into an image input apparatus as disclosed by Hosoe support portions that are of structure having an opening portion in the outer side thereof, and a case member for covering the opening portion that is mountable on the opening portion.

With respect to claim 16, Koizumi teaches guide means (bush guide; see Col. 7, lines 65-6) to be provided for guiding the communication cable 6 (see also Fig. 22). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate into the image input apparatus as disclosed by Hosoe guide means as disclosed by Koizumi.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Korling (U.S. Patent No. 4,341,452).

Korling discloses a movable camera apparatus (triaxial universal cameral mount 10) comprising a movable portion (yoke 20) and a fixed portion (tripod 16),

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and capable of being pan-driven, wherein the yoke 20 and the tripod 16 have engagement means (attachment assembly 22) engaged with each other for pan rotation, and the engaged portions (washers 50a, b) of the attachment assembly 22 are formed of a resin material high in lubricity (see Col. 4, line 61 to Col. 5, line 3, Col. 7, lines 59-68 and Fig. 3).

9. Claims 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Haskin (U.S. Patent No. 5,790,910).

With regard to claim 18, Haskin discloses a movable camera apparatus (camera mounting apparatus 20) comprising a camera unit (camera 22) and a pan head (swivel assembly 28) comprising a movable portion (camera screw 66) and a fixed portion (socket 56), wherein mounting means (openings 39-mounting tabs 40) for fixing the camera mounting apparatus 20 to a mounting surface (surface 23) is provided on the mounting surface side of the camera mounting apparatus 20, and a cover (electrical box 38) for covering the camera mounting means is removably disposed (see Fig. 1).

With regard to claim 19, Haskin teaches the openings 39 to be threaded holes (see Fig. 1).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is provided to further show the state of the art with respect to support structures: U.S. Patent No. 4,736,218 to Kutman.


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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Nguyen whose telephone number is 703-305-2771. The examiner can normally be reached on M-F 8:30 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7723 for regular communications and 703-305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

mpn
February 4, 2002


RUSSELL ADAMS
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